

Curriculum Vitae
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David W. Boyd, Jr.

Work Address

USDA, ARS Small Fruit Research Station
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Poplarville, MS 39470
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Education:

1996 Biology B.S. Bob Jones University, Greenville, SC 29614

1998 Entomology M.S. Clemson University, Clemson, SC 29634

Thesis title: *Allium* as Companion Plant and Resource Disruptive for Control of Two-spotted Spider Mite, *Tetranychus urticae* Koch (Acari: Tetranychidae) in Ornamental Horticulture

2001 Entomology Ph.D. Clemson University, Clemson, SC 29634

Dissertation title: *Deraeocoris nebulosus* (Uhler) (Hemiptera: Miridae): A Potential Biological Control Agent

Work Experience:

December 2001-Present

Research Entomologist, USDA, ARS Small Fruit Research Station, Poplarville, MS 39570.
-conduct research with pests of ornamental plants grown in the Gulf States region

August 1998-December 2001

Doctoral Student and Research and Teaching Assistant, Clemson University

-designed and conducted research to test *Deraeocoris nebulosus*' potential as a biological control agent, used a scanning electron microscope to determine the morphological differences among phytophagous and zoophagous plant bugs, used biochemical techniques to determine the digestive enzyme content of several plant bugs

-Employer - Dept. of Entomology, 114 Long Hall, Clemson University, Clemson, SC 29634

-Supervisor - David R. Alverson, Dept. of Entomology, 114 Long Hall, Clemson University, Clemson, SC 29634

August 1996-August 1998

Masters Student and Research Assistant, Clemson University

-designed and conducted research to test efficacy of organic repellents to two-spotted spider mites, conducted pesticide trials

- Employer - Dept. of Entomology, 114 Long Hall, Clemson University, Clemson, SC 29634
- Supervisor - David R. Alverson, Dept. of Entomology, 114 Long Hall, Clemson University, Clemson, SC 29634

March 1998-September 1999

- Black Fly Colony Maintenance, Medical/Veterinary Entomology Lab, Clemson University
- helped maintain colony of *Simulium vittatum* 'IS-7', set-up and conducted efficacy trials for biological pesticides against blackflies
- Employer - Dept. of Entomology, 114 Long Hall, Clemson University, Clemson, SC 29634
- Supervisor - Elmer Gray, (current address), Dept. of Entomology, University of Georgia, Athens, GA 30602

August 1994-May 1996

- Biology Lab Assistant, Bob Jones University
- laboratory preparation for general biology, microbiology, genetics, and cell biology
- Employer - Dept. of Biology, Bob Jones University, Greenville, SC 29614
- Supervisor - W. Michael Gray, Dept. of Biology, Bob Jones University, Greenville, SC 29614

Related Experience:

- 1998-2001 *Deraeocoris nebulosus* colony rearing
 - developed rearing techniques, maintained colony, produced insects needed for research
- 1999 Trichomycete (fungi) colony rearing
 - maintained a colony of *Smittium megazygosporum*
- 1996-1997 New pesticide trials for industry
 - helped develop and conduct efficacy tests for pests of ornamental plants

Refereed Publications:

- Dobbs, T. T. and **D. W. Boyd, Jr.** 2005. Status and distribution of *Montandoniola moraguesi* (Hemiptera: Anthocoridae) in the continental United States. Fla. Entomol. *Inpress*.
- Held, D. W., **D. W. Boyd, Jr.**, T. Lockely, and G. B. Edwards. 2005. Status of the exotic thrips *Gynaikothrips uzeli* Zimmerman (Thysanoptera: Phlaeothripidae), in the Southeastern United States. Fla. Entomol. 88:538-540.
- Wheeler, A. G., Jr. and **D. W. Boyd, Jr.** 2005. Distribution of an invasive weevil, *Pseudocneorhinus bifasciatus* Roelofs (Coleoptera: Curculionidae), in the southeastern United States. J. Entomol. Sci. 40:25-30.

- Boyd, D. W., Jr.** and C. L. Cheatham. 2004. Evaluation of twelve genotypes of Hibiscus for resistance to hibiscus sawfly, *Atomacera decepta* Rohwer (Hymenoptera: Argidae). J. Environ. Hort. 22: 170-172.
- Pettis, G. V., **D. W. Boyd, Jr.**, S. K. Braman, and C. Pounders. 2004. Potential resistance of crape myrtle cultivars to flea beetle (Coleoptera: Chrysomelidae) and Japanese beetle (Coleoptera: Scarabaeidae) damage. J. Econ. Entomol. 97: 981-992.
- Kanga, L. H. B., W. A. Jones, R. A. Humber, and **D. W. Boyd, Jr.** 2004. Fungal pathogens of the glassy-winged sharpshooter, *Homalodisca coagulata* (Homoptera: Cicadellidae). Florida Entomol. 87: 225-228.
- Boyd, D. W., Jr.** and D. R. Alverson. 2004. Effects of Temperature and Water Source on Development of *Deraeocoris nebulosus* (Uhler) (Hemiptera: Miridae), a predacious plant bug. J. Entomol. Science 39: 202-213.
- Boyd, D. W., Jr.** 2003. Digestive enzymes and stylet morphology of *Deraeocoris nigrutilus* (Uhler) (Hemiptera: Miridae) reflects adaptations for predatory habits. Ann. Entomol. Soc. Am. 96: 667-671
- Boyd, D. W., Jr.** and W. K. Reeves. 2003. *Anyphaena* (Araneae: Anyphaenidae) overwintering on lowest limbs of white oak. J. Arach. 31: 40-43.
- Boyd, D. W., Jr.** and D. R. Alverson. 2003. Predation of aphids on caged oak (*Quercus* sp.) saplings in a greenhouse by *Deraeocoris nebulosus* (Hemiptera: Miridae). J. Agric. Urban Entomol. 20: 55-58.
- Boyd, D. W., Jr.**, A. C. Cohen, and D. R. Alverson. 2002. Digestive enzymes and stylet morphology of *Deraeocoris nebulosus* (Uhler) (Hemiptera: Miridae), a predacious plant bug. Ann. Entomol. Soc. Am. 95: 395-401.
- Boyd, D. W., Jr.** and D. R. Alverson. 2000. Repellency effects of garlic extracts on twospotted spider mite, *Tetranychus urticae* Koch. J. Entomol. Sci. 35: 86-90.

Non-refereed Publications:

- D. W. Boyd, Jr.** 2005. Analyzing azaleas: USDA research reveals which evergreen cultivars are most resistant to azalea lace bugs. Ornamental Outlook May: 10-12.
- D. W. Boyd, Jr.** 2005. Beating the hibiscus sawfly. American Nurseryman February 15: 22-26.
- D. W. Boyd, Jr.** and C. L. Cheatham. 2005. Cutting hibiscus sawfly short: research shows

which perennial species are most resistant. Nursery Management & Production (NMPro) February: 61-67.

Pounders, C., G. V. Pettis, **D. W. Boyd, Jr.** and K. Braman. 2004. Flea beetle susceptibility. Nursery Management & Production (NMPro) March: 48-51.

Hesselein, C. P. and **D. W. Boyd, Jr.** 2003. Strawberry Rootworm Biology and Control on Azaleas. Proceedings of the SNA Research Conference 48: 174-176.

Boyd, D. W., and D. R. Alverson. 1997. Repellency of *Allium* extracts on two-spotted spider mites. Proc. So. Nurserymen's Assoc. Res. Conf. 42: 48-51.

Boyd, D. W., Jr. and D. R. Alverson. 1997. Spider Mites. Southeastern Floriculture 7(2): 36-37.

Information and Extension Articles:

Boyd, D. W., Jr. 1999. *Deraeocoris nebulosus* (Uhler) (Heteroptera: Miridae). In Weeden, Shelton, and Hoffmann (Eds.) *Biological Control: A guide to natural enemies in North America*. Internet access:
<http://www.nysaes.cornell.edu/ent/biocontrol/predators/deraeocoris.html>

Boyd, D., P. A. Zungoli, and E. P. Bensen. 1999. Clover mites. Entomology Insect Information Series, Clemson University. Internet access:
<http://entweb.clemson.edu/cuentres/eiis/hands/hs17.pdf>

Boyd, D. and C. S. Gorsuch. 1998. Cyclamen mites. Entomology Insect Information Series, Clemson University. Internet access:
<http://entweb.clemson.edu/cuentres/eiis/turform/to14.pdf>

Boyd, D. W. and C. S. Gorsuch. 1998. Spider mites. Entomology Insect Information Series, Clemson University. Internet access:
<http://entweb.clemson.edu/cuentres/eiis/turform/to13.pdf>

Boyd, D., P. A. Zungoli, and E. P. Bensen. 1998. House dust mites. Entomology Insect Information Series, Clemson University. Internet access:
<http://entweb.clemson.edu/cuentres/eiis/hands/MV7.pdf>

Competitive Research Grants:

2001 W. C. Nettles endowed memorial grant. Entomology Department, Clemson University.

- A study of the digestive enzymes of *Deraeocoris nigrifolius* Knight. \$1,000
- 2000 Ornamentals Enhancement Program. Clemson University. Rearing *Deraeocoris nebulosus* (Uhler) for biological control of landscape pests. (with D. R. Alverson) \$10,000 Renewal.
- 2000 W. C. Nettles endowed memorial grant. A study of the digestive enzymes of predaceous mirids. Entomology Department, Clemson University. \$1,000
- 1999 Ornamentals Enhancement Program. Clemson University. Rearing *Deraeocoris nebulosus* (Uhler) for biological control of landscape pests. (with D. R. Alverson) \$10,000
- 1999 W. C. Nettles endowed memorial grant. Entomology Department, Clemson University. Scientific visit to Dr. A. C. Cohen, Mississippi State, MS. \$600.00
- 1999 Ornamentals Enhancement Program. Clemson University. A novel biological control agent for ornamental horticulture. (with D. R. Alverson and A. G. Wheeler, Jr) \$14,950 Renewal.
- 1998 Ornamentals Enhancement Program. Clemson University. A novel biological control agent for ornamental horticulture. (with D. R. Alverson and A. G. Wheeler, Jr.) \$13,500

Presentations at Scientific Meetings:

- Boyd, D. W., Jr.** and D. W. Held. 2005. Biology of *Gynaikothrips uzeli* (Thysanoptera: Phlaeothripidae) a pest of *Ficus benjamina*. 53rd Annual Meeting of the Entomological Society of America, Fort Lauderdale, FL.
- Held, D. W. and **D. W. Boyd, Jr.** 2005. Monitoring and Control of *Gynaikothrips uzeli*, an exotic thrips leaf-folding thrips attacking weeping fig, *Ficus benjamina*. 53rd Annual Meeting of the Entomological Society of America, Fort Lauderdale, FL.
- Boyd, D. W., Jr.** and C. Pounders. 2005. Host plant resistance of evergreen azaleas to azalea lace bug (Hemiptera: Tingidae). Turf and Ornamental Symposium, 79th Annual Meeting of the Southeastern Branch, Entomological Society of America. Tunica, MS.
- Hesselein, C. and **D. W. Boyd, Jr.** 2005. Screening insecticide media drenches for control of strawberry rootworm larvae in container grown plants. Turf and Ornamental Symposium, 79th Annual Meeting of the Southeastern Branch, Entomological Society of America. Tunica, MS.
- Boyd, D. W., Jr.** and C. P. Hesselein. 2004. Biology of the strawberry rootworm, *Paria fragariae* (Coleoptera: Chrysomelidae), in containerized azaleas. 49th Annual Southern

Nursery Association Research Conference, Atlanta, GA.

- Boyd, D. W., Jr.** and A. G. Wheeler, Jr. 2004. The twobanded Japanese weevil, *Pseudocneorhinus bifasciatus* (Roelofs) (Coleoptera: Curculionidae): Southeastern U. S. distribution of an adventive pest of ornamental shrubs. 49th Annual Southern Nursery Association Research Conference, Atlanta, GA.
- Cheatham, C. L. and **D. W. Boyd, Jr.** 2004. Tolerance of selected hibiscus genotypes to the hibiscus sawfly. 49th Annual Southern Nursery Association Research Conference, Atlanta, GA.
- Hesselein, C. P. and **D. W. Boyd, Jr.** 2004. Insecticide efficacy trials for control of the strawberry rootworm, *Paria fragariae* Wilcox (Coleoptera: Chrysomelidae). 49th Annual Southern Nursery Association Research Conference, Atlanta, GA.
- Boyd, D. W., Jr.** and C. P. Hesselein. 2004. A season's worth of sampling: what we've learned about the strawberry rootworm in containerized azalea production. Turf and Ornamental Symposium, 78th Annual Meeting of the Southeastern Branch, Entomological Society of America. Charleston, SC.
- Cheatham, C. L. and **D. W. Boyd, Jr.** 2004. Evaluation of twelve species of hibiscus for resistance to the hibiscus sawfly, *Atomacera decepta* Rowher (Hymenoptera: Argidae). Turf and Ornamental Symposium, 78th Annual Meeting of the Southeastern Branch, Entomological Society of America. Charleston, SC.
- Hesselein, C. P. and **D. W. Boyd, Jr.** 2004. Insecticide efficacy trials for control of the strawberry rootworm *Paria fragariae* Wilcox (Coleoptera: Chrysomelidae). Turf and Ornamental Symposium, 78th Annual Meeting of the Southeastern Branch, Entomological Society of America. Charleston, SC.
- Boyd, D. W. Jr..** 2002. *Deraeocoris nebulosus*: the plant bug with no palate for plants. Informal Heteropterists' Conference (H.A.S.T.E.), 50th Annual Meeting of the Entomological Society of America, Fort Lauderdale, FL.
- Boyd, D. W., Jr.** 2002. *Deraeocoris nebulosus* (Hemiptera: Miridae): a biological control agent for ornamentals. 76th Annual Meeting Southeastern Branch, Entomological Society of America. Little Rock, AR.
- Boyd, D. W., Jr.** 2000. Digestive enzyme content of the salivary gland complex and anterior midgut from *Deraeocoris nebulosus* (Uhler) (Hemiptera: Miridae). South Carolina Entomological Society Annual Meeting. Myrtle Beach, SC.
- Boyd, D. W., Jr.** 2000. Ultrastructure of Mirid stylets (Hemiptera: Miridae): A comparative SEM study. Joint Annual Meeting of the Société d'entomologie du Québec,

Entomological Society of Canada and Entomological Society of America. Montreal.

Boyd, D. W., Jr. 1999. Overwintering spiders on white oak, *Quercus alba* L. Annual Meeting of the Entomological Society of America. Atlanta.

Boyd, D. W., Jr., A. G. Wheeler, Jr., and D. R. Alverson. 1998. *Deraeocoris nebulosus*: The unknown predator. South Carolina Entomological Society Annual Meeting. Charelston, SC.

Boyd, D. W. and D. R. Alverson. 1997. Repellency of *Allium* extracts on two-spotted spider mites. 42nd Annual Southern Nursery Association Research Conference. Atlanta.

Presentations at Grower Meetings:

Boyd, D. W., Jr. 2005. Strawberry Rootworm Update. Auburn University's Mobile Research Center Horticulture Field Day, 18 October, Mobile Ornamental Horticulture Research Center, Mobile, AL.

Boyd, D. W., Jr. 2005. Why are some azaleas resistant to lace bug? Auburn University's Mobile Research Center Horticulture Field Day, 18 October, Mobile Ornamental Horticulture Research Center, Mobile, AL.

Boyd, D. W., Jr. 2004. Scouting for insects and mites in the urban landscape. The Gulf States Horticultural Expo, Mobile, AL, January 29-31.

Boyd, D. W., Jr. 2003. Sampling for pests: reducing the cost of pest management. The Gulf States Horticultural Expo, Mobile, AL, January 30 - February 1.

Boyd, D. W., Jr. and C. Pounders. 2003. Crape Myrtle Cultivars Vary in their Susceptibility to the Metallic Flea Beetle. Auburn University's Mobile Research Center Horticulture Field Day, 21 October 2003, Mobile Ornamental Horticulture Research Center, Mobile, AL.

Boyd, D. W., Jr. and C. P. Hesselein. 2003. Strawberry Rootworm Biology and Sampling on Azaleas. Auburn University's Mobile Research Center Horticulture Field Day, 21 October 2003, Mobile Ornamental Horticulture Research Center, Mobile, AL.

Boyd, D. W., Jr. and C. L. Cheatham. 2003. Evaluation of 12 *Hibiscus* spp. for Tolerance to the Hibiscus Sawfly *Atomocera decepta* Rohwer. 31st Annual Horticulture Field Day, 02 October 2003, Mississippi State University, Poplarville, MS.

Boyd, D. W., Jr. and C. Pounders. 2003. Crape Myrtle Cultivars Vary in their Susceptibility to the Metallic Flea Beetle. 31st Annual Horticulture Field Day, 02 October 2003, Mississippi State University, Poplarville, MS.

Boyd, D. W., Jr. and C. P. Hesselein. 2003. Strawberry Rootworm Biology, Control, and Sampling on Azaleas. 31st Annual Horticulture Field Day, 02 October 2003, Mississippi State University, Poplarville, MS.

Boyd, D. W., Jr. and Cecil Pounders. 2002. Life History of Metallic Flea Beetles on Crape Myrtles and Host Resistance. George County Nursery Association Field Day, 31 October 2002, Lucedale, MS.

Boyd, D. W., Jr. and Chazz P. Hesselien. 2002. Biology and Life History of the Strawberry Rootworm on Azaleas. 30th Annual Horticulture Field Day, 24 October 2002, Mississippi State University, Poplarville, MS.

Boyd, D. W., Jr. and Cecil Pounders. 2002. Life History of Metallic Flea Beetles on Crape Myrtles and Host Resistance. 30th Annual Horticulture Field Day, 24 October 2002, Mississippi State University, Poplarville, MS.

Workshops Attended:

February 2005 Basics of Insect Diet & Rearing. Science & Technology Workshop. Insect Diet and Rearing Insitute, LLC, Tucson, AZ.

October 2002 Principles and Procedures for Rearing Quality Insects, Mississippi State University Entomology Department, Starkville, MS

May 1999 Annual Southeastern Informal Ornamentals Workshop, Athens, GA

October 1998 Eleventh Ornamental Workshop on Diseases and Insects, Crossnore, NC
-gave presentation: Boyd, D. W., Jr., A. G. Wheeler, Jr., and D. R. Alverson. *Deraeocoris nebulosus*: The unknown predator.

May 1998 Annual Southeastern Informal Ornamentals Workshop, Opelika, AL

Teaching Experience:

Spring 1999 ENT 410/610, Insect Taxonomy
-Laboratory assistant and guest lecturer

Spring 2000 ENT 870, Insect Physiology and Molecular Biology
-Laboratory coordinator, laboratory instructor and guest lecturer

Fall 2000 ENT 405/605, Insect Morphology
-Laboratory assistant

Spring 2001 BIOL 109, Introduction to Life Science
-Laboratory instructor

Summer 2001 BIOL 101, General Biology

-Laboratory coordinator and laboratory instructor

Reviews of Book Chapters:

- B. Alberts, D. Bray, A. Johnson, J. Lewis, M. Raff, K. Roberts, and P. Walter. 1998. *Essential cell biology: An introduction to the molecular biology of the cell*. Garland Publishing, Inc. New York. Most of the chapters (student reviewer)
- A. G. Wheeler, Jr. 2001. *Biology of plant bugs(Hemiptera: Miridae): Pests, predators, opportunists*. Cornell University Press. Ithaca, NY. Chapter on physiology

Professional Memberships:

Entomological Society of America	1996-Present
American Association for the Advancement of Science	1999-2002
South Carolina Entomological Society	1999-2001
International Heteropterists' Society	2000-Present
Azalea Society of America	2002-Present